

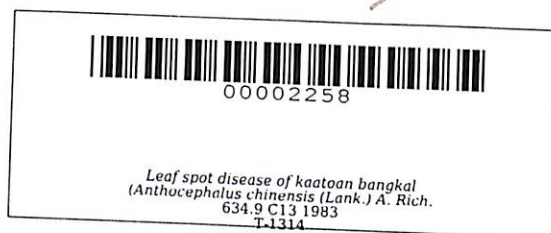
LEAF SPOT DISEASE OF KAATOAN BANGKAL (ANTHOCEPHALUS
CHINENSIS (LAMM.) A. RICH. EX WALP.)
AT SEEDLING STAGE

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LEAF SPOT DISEASE OF KAATOAN BANGKAL (ANTHOCEPHALUS
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ABSTRACT

CALI, CAHARODIN A., University of the Philippines at Los Baños, May, 1983. Leaf Spot Disease of Kaatoan Bangkal (Anthocephalus chinensis (Lamk.) A. Rich. ex Walp.) at Seedling Stage.

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The study on leaf spot disease of Kaatoan bangkal (Anthocephalus chinensis (Lamk.) A. Rich. ex Walp.) at seedling stage was conducted in Makiling Experimental and Demonstration Forest (MEDF) nursery, College, Laguna from July 16, 1981 to June 22, 1982.

This pathological problem caused severe leaf spots on seedlings of A. chinensis resulting to stunted growth and premature falling of leaves. Around 100 percent of the observed seedlings in the nursery were in different stages of the disease with calculated infection index of 71.47 percent.

The visual symptoms of the disease appeared circular spots, very irregular, yellowish to brownish with apparent gray to black concentric rings similar to contour lines.

The fungus produced hyaline and granular mycelium when young, and five-celled olivaceous conidia with two or three setae in the superior hyaline cell. The inferior hyaline cell tapers into an erect pedicel. The causal organism of the disease resembles closely to Pestalotia annulata Berk. & Curt.

The fungus grew and sporulated better in all the tested media except in water agar. It grew on a wide pH range of 3-10 with optimum at pH 6. The temperature range for the growth of the fungus was 10°C to 30°C with maximum growth at 25°C. The thermal death point was between 36°C to 40°C. Light is essential for the sporulation of the fungus. Maltose and sucrose favorably supported the growth and sporulation but ammonium nitrate was poorly utilized by the fungus.

The fungal pathogen might be mechanically transmitted by the two coleopterous pests of Kaatoan bangkal. Systemic fungicides such as Benlate, Fungitox and Topsin M were promising chemicals for the control of the disease.



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INTRODUCTION

Kaatoan bangkal (Anthocephalus chinensis (Lamk.) Rich. A. ex Walp.) is a fast growing species of the family Naucleaceae thus described by Monsalud and Lopez (1967) as a "wonder tree". It is a valuable timber species among wood users as a raw material for plywood, wooden shoe, match sticks, pencil slats, and pulp and paper. The wood of this species is even suitable for wood carving in Paete, Laguna (Paa and Gerardo, 1967). Moreover, this fast growing species has been utilized in the past by some logging companies in the country to reforest their logged-over areas.

The growth rate of economically important species during the seedling stage has been reduced significantly due to the parasitic activities of fungal pathogens. Leaf spot disease is one of the prevalent serious problems that needs more research attention despite of the limited facilities and few technical men in the country today.

Kaatoan bangkal seedlings grown in the Makiling Experimental and Demonstration Forest (MEDF), College of Forestry, were affected by a fungal pathogen causing brown spot (Kobayashi, 1978). The growth of the plants were markedly retarded thus producing unhealthy seedling stocks. This pathological problem may limit the continuous seedling